CALIFORNIA WATER

INLAND EMPIRE 2022

IEUA:
Ensuring Reliability

Eastern MWD:
Focuses on Groundwater

Western MWD:
Pushing for Infrastructure

San Bernardino Valley MWD:
Collaboration is Pertinent

SCAN FOR DIGITAL EDITION

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SCWC

The Drought Is Back

It's hard to believe California was facing one of the worst droughts in its history just a few years ago. The state has since made tremendous strides in water conservation and supply management. But now the drought is back, and it's worse than ever.

Social scientists use "disaster fatigue" to describe a form of emotional exhaustion that shapes what we do when faced with multiple emergencies or disasters. And many researchers agree: the past two years have been hard on many Californians with wildfires, drought, and COVID-19. Disaster fatigue may indeed have set in, making it hard for many of us to fully grasp the severity of the drought and take action to save water.

But we must try. I've worked in water for decades, and I have never seen water planners and managers this worried about what is on the horizon for our region. With this drought's severity, we are starting to see the impacts of climate change in real-time. Saving water now may hold off dire consequences in the future.

In preparing for this issue, I have been amazed by the forward-thinking work done by so many community and water leaders to help stretch limited supplies through water recycling and reuse, stormwater capture, groundwater cleanup, and desalination. These efforts are critical to building water supply resiliency from the impacts of climate change, earthquakes, droughts, aging infrastructure and more. There is much work to be done, but progress is happening.

Your interest in what's happening with Southern California's water supply is greatly appreciated and I hope you will join us in saving water as well as in our efforts to address California's water issues.

Please connect with us on Facebook or Instagram, where you'll find us under the username socalwater. We will love to hear from you!

Charley Wilson
Executive Director

The Southern California Water Coalition is a nonprofit, nonpartisan public education partnership dedicated to informing Southern Californians about our water needs and our state's water resources.

Above, Diamond Valley Lake in Hemet, built by Metropolitan, provides water storage close to home. Water agencies offer turf replacement rebates to encourage residents to plant drought-tolerant landscapes, as shown at right. *Photos Courtesy of Metropolitan*

Climate Change Drives Weather Extremes

By Elizabeth Smilor
Special Sections Writer

Mother Nature has not been easy on Californians lately.

Wildfires have scorched millions of acres, an extended drought is draining our reservoirs, Sierra snowpack is well below average .... and climate change science tells us it will only get worse.

Coupled with the pandemic, it's no surprise if helplessness causes us to throw up our hands in despair when we hear we're not conserving enough water. With water still flowing freely from most of our taps, it's hard to feel like this drought is severe. But it is.

The good news is regional water managers, some featured in this section, are preparing for the worst-case scenario so that water still flows from your faucet. Gov. Gavin Newsom has asked urban water suppliers to activate "level 2" of their water shortage contingency plans, which means businesses and residents will be asked to take conservation up a notch.

"We can't just wait for the rain to come," said Metropolitan Water District of Southern California General Manager Adel Hagekhalil. "What we need to do is take bold, strategic actions today to adapt to this future."

Drought is defined as a prolonged period of water shortage. This drought has been characterized as a meteorological, hydrological and agricultural one, meaning the state has had below average rainfall which has affected streamflow and reservoir levels as well as food production due to a lack of soil moisture.

What makes this drought different? The simple answer is climate change.

The water years, from Oct. 1 through Sept 30, of 2020 and 2021 were the driest consecutive years on record for rainfall in California. December storms stirred optimism, but dry conditions returned at the start of this year and as of the end of March nearly all of the state is in severe or extreme drought, according to the National Integrated Drought Information Center (drought.gov).

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For comments or questions, email Sean Fitzgerald at Sean@VoxCivic.com.

"We are experiencing climate change whiplash in real time with extreme swings between wet and dry conditions. That means adjusting quickly based on the data and the science," said California Department of Water Resources (DWR) Director Karla Nemeth. "While we had hoped for more rain and snow, DWR has been preparing for a third consecutive year of drought since October."

A recent study published in the journal Nature Climate Change that analyzed tree rings to determine that the American West is in the worst megadrought in 1,200 years, found that human-caused climate change is responsible for about 42 percent of the soil moisture deficit since 2000.

"Without climate change, the past 22 years would have probably still been the driest period in 300 years," said UCLA geographer Park Williams, the lead author of the study. "But it wouldn't be holding a candle to the megadroughts of the 1500s, 1200s or 1100s."

Where Southern California's Water Comes From

On average, water use in California is 50 percent environmental, 40 percent agricultural and 10 percent urban, according to the Public Policy Institute of California.

"While we have made historic investments to protect our communities, economy and ecosystems from the worsening drought across the West, it is clear we need to do more," said Gov. Newsom, in announcing the revised guidelines that could set day or time limits on watering in residential areas and ban watering ornamental grass on commercial properties. "Amid climate-driven extremes in weather, we must all continue to do our part and make water conservation a way of life."

About 30 percent of Southern California's urban water comes from the State Water Project, a system of reservoirs and canals that carry water from Northern California to regional water agencies. Another 25 percent is imported from the Colorado River Basin, which supplies water to seven U.S. and Mexican states and 29 federally recognized tribes with approximately 40 million people. Both of these sources are compromised by record-setting drought.

"What we're seeing now is a strain on both systems. We haven't seen this before where both the Colorado River system and the State Water Project are strained," said Hagekhalil. "It's a wake-up call for all of us."

A cooperative of 26 member agencies, Metropolitan provides more than half the water used by 19 million people in six Southern California counties. Some areas, including part of San Bernardino and Riverside counties, are more dependent upon water from the State Water Project than others and with both systems under stress, redistribution becomes more difficult.

"The water playbook that we've used for 100 years, can't be used anymore. said Metropolitan's Hagekhalil. "The new chapter in the playbook is you recycle every drop and store it, and when you have heavy rain, you can move it and put it both underground and above ground."

The other half of Southern California's water is locally sourced from stormwater capture, groundwater basins and recycled water. Metropolitan built Diamond Valley Lake in Hemet, which opened in 2003, to create more storage capacity close to home.

URBAN WATER CONSERVATION

While urban water use accounts for 10 percent of the state's overall use, it is still important to save every drop. Half of urban water use is for outdoor landscaping, so outside is a good place to start. The state Department of Water Resources is granting Metropolitan $2 million for its regional turf replacement program. Metropolitan offers residents a $2-per-square-foot rebate for lawn replacement, but regional agencies might offer more. For indoor use, check for rebates from your water agency for low-flow showerheads and toilets, and water-efficient appliances.

Other home conservation tips:

- Check for leaks, inside and out. If your water bill seems high, request a leak audit.
- Take shorter showers.
- Turn off water while brushing teeth and shaving.
- Wash only full loads of dishes and clothes, and don't run faucet constantly when hand washing.
- Water your garden less often and then only during cool parts of the day.
- Put a layer of mulch over plants and trees.

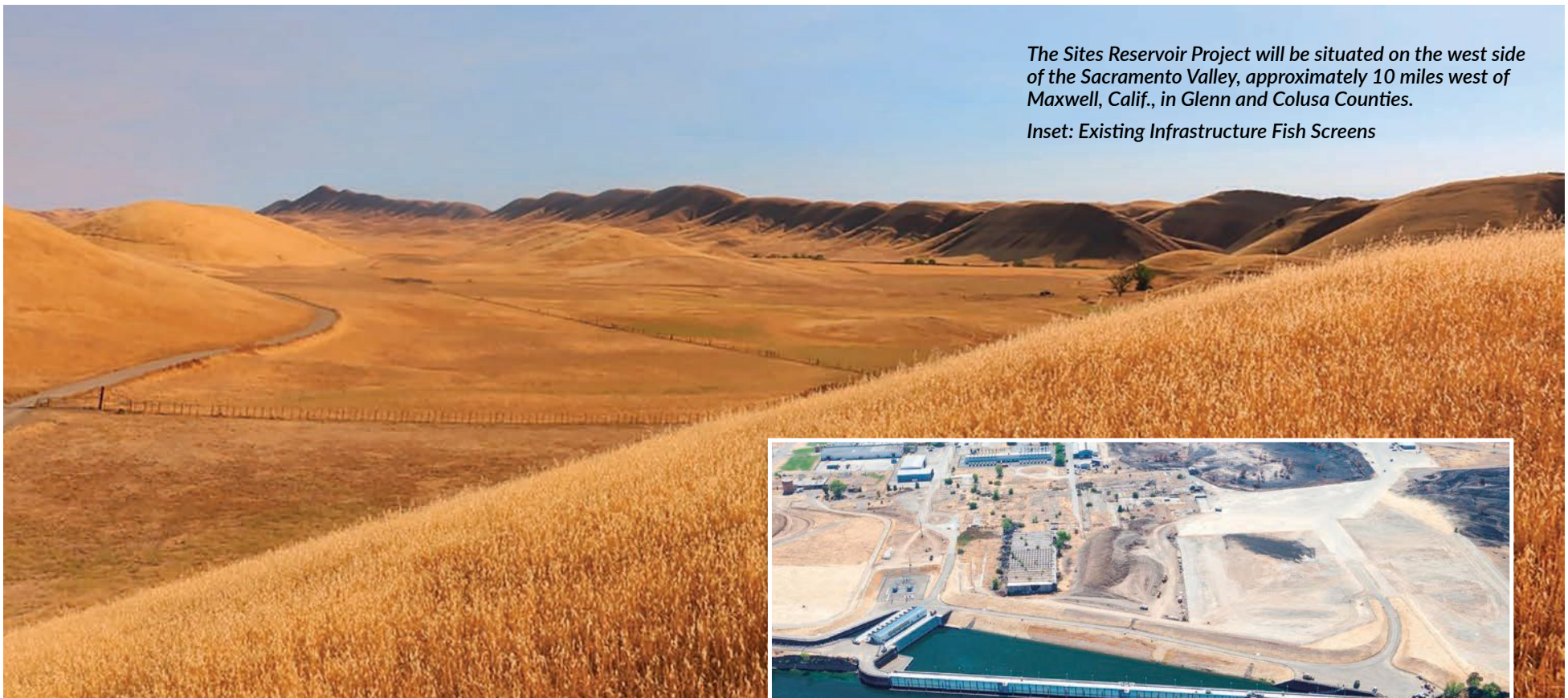
"That project is saving us with 800,000 acre-feet of storage," said Hagekhalil of Diamond Valley. "We need more large projects to store water in wet years so it is available."

The Regional Recycled Water Program, a joint effort of Metropolitan and Los Angeles County Sanitation Districts, at full sale will produce up to 150 million gallons of highly treated water daily, enough to serve more than 500,000 homes. Metropolitan is asking both the state and federal governments for financial support to accelerate this project.

"Time is not on our side," Hagekhalil said. "We need to do these things quickly. Our goal is to provide a future that no matter what the weather condition is we're going to have reliable water for everyone."

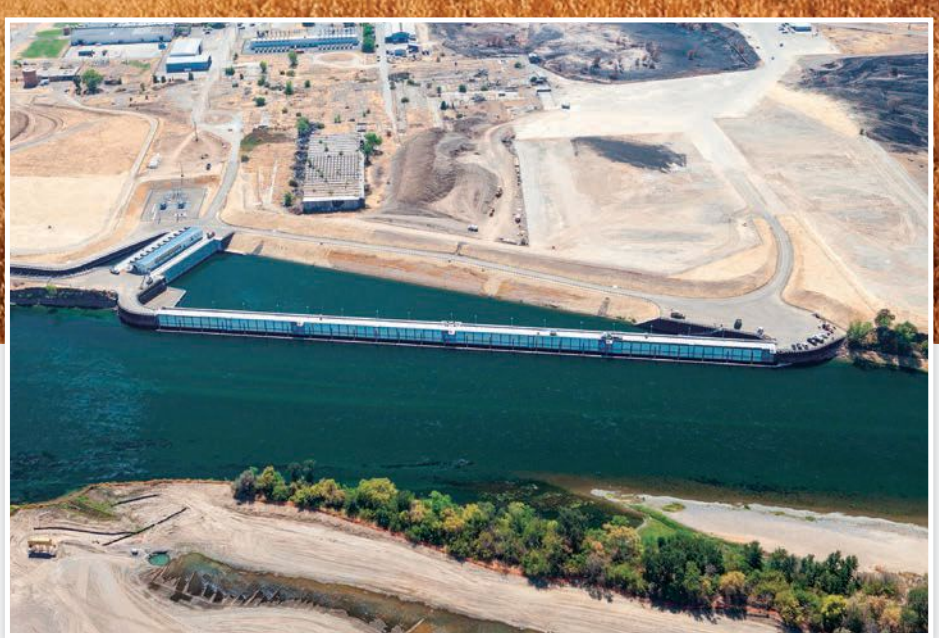
Water managers agree a reliable water future requires investment in local, regional and state infrastructure, innovation in recycling water, groundwater protection, storage and conservation. Reaching that future will require cooperation amongst all water users and managers.

"Metropolitan is what it is because of the member agencies, and was created to facilitate this coordination because no one can do things alone and nobody should. Our strength is in our collaboration and our working together," said Hagekhalil. "My commitment is to continue working for all our member agencies and make sure no one is left behind. We take care of our communities and make sure every community has the water they need." ❍



The Sites Reservoir Project will be situated on the west side of the Sacramento Valley, approximately 10 miles west of Maxwell, Calif., in Glenn and Colusa Counties.

Inset: Existing Infrastructure Fish Screens



Sites Reservoir

Is a Solution to California's Megadrought

When it comes to water, California continues to break records, and not the kind we like to brag about.

According to a recent study by Nature Climate Change, the West Coast's drought ***has worsened so much in one year,*** that it is now the driest in at least 1,200 years and is a worst-case climate change scenario playing out live. In fact, it's being labeled as a "megadrought."

With January through March 2022 turning out to be the driest months on record, many water suppliers are leaning more on their stored water supplies.

In many ways, Sites is exactly what a state burdened by droughts and atmospheric rivers needs. Sites would capture and store water from the Sacramento River during high flows without hurting the river fishery —after all other water rights and regulatory requirements are met — and is made available to California's environment, communities, and farms when it's most needed — especially during times of drought. But Sites Reservoir is just part of the solution — we can and must utilize all the tools in our toolbox — recycling, conservation, desalination, groundwater replenishment, and more yes, more water storage.

Sites Reservoir does not dam any major river. The reservoir would be located off-stream and be situated in the Glenn and Colusa counties. Sites is designed to help the environment, not cause harm. And a large portion of the water saved in Sites is specifically set aside for fisheries and the environment during dry years. This is a first of its kind and a model for successful future water management.

If Sites had been in place prior to 2021, we could have captured and stored much of the excess prior years flood flows for use in what was a very dry year, and California would have had an additional 1 million acre-feet of water available for use during 2021 when we it was badly needed. And a good portion of that water would have been held over for use in 2022 which is an equally bad or worse water year.

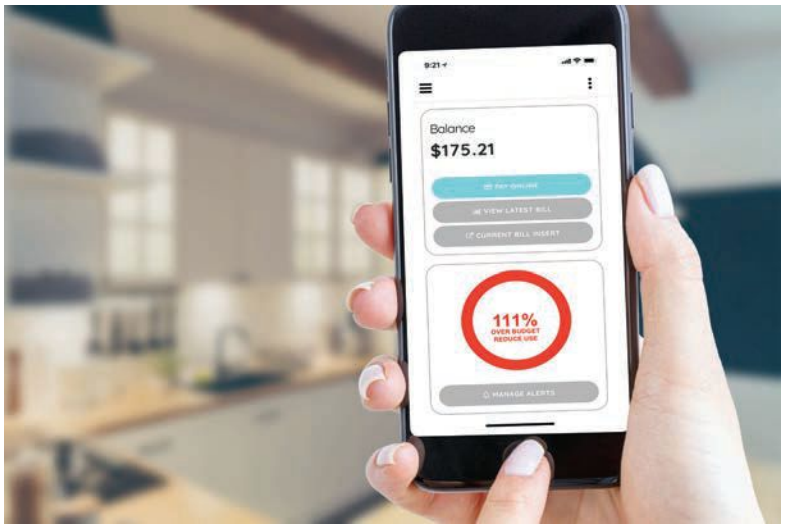
In summation, Sites can best be described as an insurance policy. And if the scientific projections are correct about the impacts of climate change, then having Sites Reservoir will mean we will be able to collect even more water in the reservoir for use during future extended droughts.

The Sites Authority is advancing Sites Reservoir because it's needed for the Sac Valley. And we're proud the project is supported by local water agencies, irrigation districts, and municipalities across California. We're also proud to have the State and Federal government investing in the project. This is a beneficiary pays project which is how future large water infrastructure will need to be implemented. Sites would cover the diverse needs of the entire state, and importantly, the foundation starts with support of local participants right in the proposed project area's backyard.

It's critical that we continue to invest in a broad range of solutions to ensure a resilient water future, and Sites Reservoir would increase water storage, help alleviate symptoms, and address the impacts of a megadrought. It's time to build Sites now. ❍

Sites

www.sitesproject.org



Above: CropSWAP provides incentive to replace high water use crops with more lower water use ones. Top right: MyWaterTracker lets customers check their real-time water use 24/7. Lower right: Pipeline replacements are part of Rancho Water's Asset Management Plan.

Rancho Water

Innovation and Technology for the Future

The ongoing drought conditions in California have placed the onus on many water agencies to reevaluate their ideas about resiliency and sustainability. At Rancho California Water District (Rancho Water / District), this means a continued focus on innovation, technology, and community partnerships. Rancho Water continues to launch forward-thinking projects that encourage water resiliency, maximize the life cycle of facilities, and empower its customers to monitor their water use.

Water Resiliency: CropSWAP (Sustainable Water for Agricultural Production)

Rancho Water's crop growers have undeniably been hit with mounting demands to maintain a successful annual crop: an ongoing statewide drought; rising costs of imported water; and an increasing demand being placed on the energy grids. To help these customers, the District implemented the CropSWAP program. The program financially assists customers with crop conversion projects that save water by replacing higher water use crops (like avocados) with lower water use crops such as wine grapes, olives, and cut flowers.

CropSWAP helps Rancho Water meet its long-term goals of water supply reliability, efficient water management, and economic sustainability for local agriculture. The 29 crop conversion projects that have been operational for more than one year represent 156 acres of converted crops with annual water savings of 400 million gallons per year.

Maximizing Assets: Facility Management Plan

Rancho Water has also employed a progressive Asset Management Plan (Plan) to bring a business approach to maintaining our valuable system assets such as pipelines, treatment plants, and lift stations. The Plan addresses the inevitable aging of our system in a cost effective and planned approach.

The benefits of the asset management planning include improved decision making and more cost effective replacements of capital assets. It also allows Rancho Water to work in advance with other governing authorities, ratepayers, and key stakeholders. This approach allows Rancho Water to minimize unplanned repairs providing a savings to the District and its customers of nearly two-thirds the cost.

Custom Technology: MyWaterTracker & Leak Alerts

Rancho Water is at the leading edge of technology. To provide its customers with a way to visually view and track their water usage, Rancho Water developed MyWaterTracker, which is a custom technology that provides customers with an easy to use, digital platform to track real-time water use. Accompanying this is Rancho Water's leak notification program, which contacts the customer when a property's water meter detects a possible leak. The early detection gives customers a head start to fix the leak before it causes costly damage, unnecessarily wasting gallons of water and resulting in a higher bill.

With an innovative mind for the future, Rancho Water continues to ensure long-term sustainability of its water sources while empowering customers to be mindful of their water use. ❍

Rancho Water
WORKING FOR OUR COMMUNITY

IEUA: Securing Tomorrow's Water Supply, Today

We must continue to plan. We must continue to implement. We must continue to act.

"Securing a diverse water supply portfolio while maximizing water-use efficiency efforts provides regional, reliable water supplies now and in the future."

Shivaji Deshmukh, P.E.
IEUA General Manager

"Our region and the State are no stranger to the effects of drought and climate change. There is no questioning the amount of stress our water system is under," said IEUA General Manager Shivaji Deshmukh. "As an Agency, and as a steward of the region, we must continue to plan, implement, and act to secure a reliable water supply today and for the future."

California continues to witness the drought intensify. Reservoir levels are falling, snowpack is shrinking, and voluntary water conservation targets are not being met. These are triggers; warnings indicating the need for increased water-saving efforts.

"In addition to these triggers, IEUA is a State Water Project (SWP) reliant Agency, meaning we rely solely on the SWP for imported water supplies – 30 percent of the region's supply comes from this source," added Deshmukh. "When the water supply situation is dire, the amount of imported water supplies our region receives decreases. This decrease adds additional pressure to our region's water supply, which again, reiterates the importance of resiliency and water saving efforts."

Over the years, IEUA has taken steps to ensure water supply reliability and increase drought resiliency through cost-effective planning, investments in infrastructure, water resource management, and maintaining high standards of community outreach initiatives to enhance water awareness.

"The Agency has a reputation for making significant commitments to local supplies: water recycling, groundwater development, stormwater and recycled water recharge, and conservation programs," continued Deshmukh. "These commitments help define our promise to being a water resource steward to the region while minimizing costs and our environmental impact, especially during critically dry years."

At far left, photo of a recycled water pump at IEUA. Below left, a chlorine contact basin for water treatment. At left, the Regional Water Recycling Plant No. 5 (RP-5) Expansion Project, scheduled for completion in 2025, continues to advance IEUA's water recycling efforts. The Agency is taking many steps to ensure a reliable, drought-resistant water source for all the communities in its service area.

Planning. Implementation. Action.

While a portion of the region's water supply depends on imported water, the Agency continues to collaborate with Federal, State and local agencies, secure investments in infrastructure, and develop innovative programs that support the region's need for local resiliency. Investing in innovative programs, such as the Chino Basin Program (CBP), enhance IEUA's commitment to a diverse water supply and cost-effective planning. The CBP, for example, includes the development of a new, advanced water treatment facility, which would reduce salinity and protect the water quality of the Chino Basin while bringing $215 million to the region of conditional funding from the Proposition 1 Water Storage Investment Program. The CBP is a leading representation of a program encompassing collaboration while ensuring our region is able to meet compliance and storage needs.

"As we head into another dry year, continuing investments in water recycling and infrastructure planning are critical to increasing local supplies," explained Deshmukh. "IEUA prioritizes improved resiliency while maintaining our commitment to minimizing rate increases and keeping costs low. The Agency has successfully applied for and received hundreds of millions in grants and low-interest loans for capital improvements."

In 2020, IEUA received a $196 million Federal, low interest Water Infrastructure Finance and Innovation Act (WIFIA) loan for the Regional Water Recycling Plant No. 5 (RP-5) Expansion Project (Project). The Project, which is expected to be completed by 2025, continues to advance the Agency's water recycling efforts and is IEUA's largest capital improvement project to-date. It will include infrastructure for RP-5's ultimate buildout to treat an average flow of 30 million gallons of wastewater per day, in turn, increasing the development of recycled water – the only new major source of water to meet Southern California's growing water demand. Planning for regional growth and securing water resources will provide adaptability for the region. Information, pictures, and progress updates are available on the Project's landing page at ieua.org. ❍

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

The Inland Emp re Utilities Agency (IEUA/Agency) is a regional wastewater treatment agency and wholesale distributor of impr ted water from the Metropl itan Water District of Southern California. The Agency serves ap oximately 875ǀ 00 residents over 242s ɋ are miles in western San Bernardino County.

Water resource management is an essential service that requires a diverse workforce. IEUA is committed to developing the water industry's future workforce through communication with local high schools and community colleges to find the next generation of skilled trades.
Learn more about our workforce development initiatives at ieua.org.

Water carrying aqueduct in outer Los Angeles.
Photo by Iofoto/iStock Images

We Need Statewide Storage and Conveyance, Now

Western Municipal Water District

Working with Statewide Coalition to Elevate Need for Significant Water Infrastructure Investment

"As a General Manager, the worst day of your career is when you have to inform your customers that there's no more water. This can't be our future."

Craig Miller
General Manager

Drought. Climate change. Unpredictable weather. Terms Californians know all-too-well. But many residents and legislators do not know that California is on the brink of a water crisis. Californians need to be aware that the recent winter rain and storms were not enough to refill our major reservoirs. With a bone-dry start to the year, our water supply continues to decrease. We must act now.

In December 2021, the State Water Resources Control Board announced its first-ever zero percent allocation on the State Water Project, which meant Southern California was on a path to receive no water from Northern California.

"As a General Manager, the worst day of your career is when you have to inform your customers that there's no more water," said Western's General Manager Craig Miller. "I cannot imagine going to my residential customers and telling them they have to stop watering outdoors indefinitely or telling my commercial customers that they could potentially be without water. Southern California was nearly there just a couple of months ago, and we're hearing we will be back there again this summer."

While many agencies across Southern California have the plumbing to transfer water supplies temporarily to offset their Northern California water sources, several water agencies do not. This means local water providers would need to petition the State to provide "health and safety" water because they have no other water source.

"As the fifth-largest economy in the world experiencing drought regularly as climate change impacts become more severe, this can't be our future," said Miller.

HOW DID THIS HAPPEN?

According to a study from the University of California, Los Angeles, the American West is currently in the worst 22 dry-year period in at least 1,200 years. Climate change forces water agencies to plan for shorter periods of heavy rain, hotter summers, and less snowpack. The current water system of California was built to provide water in a much different climate; today's climate has changed and continues to change, which means we need our water system to change.

WHAT DOES "HEALTH AND SAFETY" WATER MEAN FOR OUR FUTURE?

It means the State would provide only the minimum amount of water needed to support indoor water needs such as drinking, bathing and cooking. This means no outdoor irrigation for anyone, no water for agriculture, further depletion of groundwater basins, catastrophic economic impacts, disadvantaged communities will suffer, and ecosystems and wildlife being further strained.

WHAT'S THE STATE'S PLAN TO ADDRESS THESE INTENSIFYING CONDITIONS?

California is one of the most successful economic regions in the world, and was founded on a robust statewide water system developed to collaboratively use the Sierra snowpack with local groundwater supplies. Despite increasing populations and changing climate conditions, there has not been increases to California's water storage capacity in decades. Even more concerning, special interests have captured political agendas, severely impacting the State's ability to move water throughout California. The State's primary answers to avoiding a water supply disaster are to have all Californians conserve more water, and to reduce imported water demands by funding a percentage of costs for regional projects.

Southern Californians started doing this years ago. We have successfully gone above-and-beyond to support the State's current strategy by:

- Using up to 50 percent less water than a decade ago.
- Controlling water use to the same level as 30 years ago, even as the population has grown by more than 6 million people — and continues to grow.
- Taking advantage of more than $850 million in water conservation rebates provided by water agencies since the last major drought.
- Saving money and water by abiding by budget-based rates.
- Investing in local supply projects that have reduced reliance on imported water.

Aqueducts at the south end of San Joaquin Valley, pumping over the Grapevine.
Photo by Sundry Photography/iStock

Despite efforts by local water providers and their customers, we are still on a path to a water crisis. The time is now for water managers to actively refocus statewide strategies; California's legislators must prioritize major water supply solutions.

"California needs a new game plan," continued Miller. "It's halftime, and water is three touchdowns behind. Even with local investment, more must be done. California needs to think bigger, and not just for the sake of urban populations and businesses, but the environment, agriculture, and disadvantaged communities."

While conservation and local supply projects are important, these strategies are only a piece of the solution. The overarching need is clear: we need a significant investment from California for statewide water storage, conveyance, and regulatory certainty to move and store more water when it is available.

An effort to boost water solutions as a top public priority while educating the legislature on the need for this significant investment is underway.

Water agencies across the State are working together to reinforce the need for:

- Increased water storage, both above and below ground.
- Enhanced conveyance of water when there's significant precipitation.
- Regulatory certainty that allows for the effective movement and storage of water when it is available.

As this critical statewide education campaign evolves, bringing together partners from every California region will be critical. Stay tuned for ways on how you can get involved in this effort.

From left to right: The Enterprise Bridge at Lake Oroville on April 11, 2017 and July 22, 2021.
Photos by Justin Sullivan/Getty Images

"The Governor's office, the State Legislature, and the public need to understand how critical it is that we make water storage and conveyance our number one priority," said Miller. ❍

To learn more about partnership opportunities and be part of making water a top State priority, visit **wmwd.com/CAWaterNow**

WESTERN MUNICIPAL WATER DISTRICT

The Future is Below Our Feet

EMWD's Groundwater Reliability Plus Program Will Ensure Reliability for Today and Tomorrow

"Groundwater Reliability Plus is about investing in our future by investing in ourselves. There has never been a more important time to focus on our locally controlled water supply sources."

Philip E. Paule
EMWD Board President

As the regional water supplier to one of California's fastest-growing regions, Eastern Municipal Water District (EMWD) must balance the existing needs of its customer base with preparing to meet the demands of a population that will significantly increase in size over the next generation.

How is that being done: By going to back to its roots.

EMWD is California's sixth-largest retail water agency and currently serves nearly one million people across a rapidly growing, 558-square mile service area. At just 38-percent built out based on local land use agency General Plans, EMWD is uniquely positioned as a large agency that still has significant growth on its horizon.

In line with its strong history of being future focused, EMWD is continuing to prioritize its water supply investments locally, on the very resource that was central to its foundation: Groundwater.

Established in 1950 to help manage the groundwater rights of area landowners, EMWD has always been reliant on groundwater to meet a portion of the needs of its service area. In recent years, it has doubled down on investments in local supplies through its Groundwater Reliability Plus initiative, which is a multifaceted and integrated approach toward groundwater supply, quality, replenishment and management.

"Groundwater Reliability Plus is about investing in our future by investing in ourselves," EMWD Board President Philip E. Paule said. "There has never been a more important time to focus on our locally controlled water supply sources."

Groundwater makes up approximately 16 percent of EMWD's current water supply portfolio. As California has experienced climate variations that have significantly impacted surface water deliveries, EMWD has worked to increase its local water supply sources while reducing its reliance on water from the Bay Delta and Colorado River. Those two imported sources account for approximately half of EMWD's total water supplies.

To invest in its local groundwater supplies, EMWD adopted a holistic approach that includes expanding its groundwater production facilities,

EMWD's Perris II Desalter will be completed in mid-2022, further expanding EMWD's local groundwater desalination efforts as part of a growing portfolio of groundwater projects to enhance local water reliability, improve groundwater quality, and replenish local aquifers.

improving water quality in its basins, increasing groundwater replenishment efforts, and creating a management plan to promote long-term sustainability of its aquifers.

The most recent programs EMWD is advancing as part of its Groundwater Reliability Plus initiative are:

- Water Banking: In late 2021, EMWD completed work on its Mountain Avenue West Groundwater Replenishment Facility in San Jacinto. This facility was designed to help replenish the local groundwater basin with up to 30,000 acre feet of water in a single year – enough for approximately 75,000 households annually. The facility will use State Water Project water when it is available from the state and has the ability to take a large volume of water in short periods of time. This effort is part of EMWD's proactive approach to managing water supplies amidst climate variations.
- Groundwater Desalination: This spring, EMWD is completing work on its third groundwater desalination plant in Menifee. This will nearly double the capacity of EMWD's desalination efforts. For nearly two decades, EMWD has been a statewide leader in advancing groundwater desalination, making beneficial use of an otherwise unusable drinking water resource in the region.
- Perris North Groundwater Program: To help improve groundwater quality and utilize an otherwise unusable water supply, EMWD is constructing six groundwater wells and a centralized treatment facility in the Moreno Valley area. This program received nearly $45 million in grant funding from the State Water Resources Control Board – the largest single grant in EMWD's history.
- Purified Water Replenishment: EMWD is in the design phase of a proposed Purified Water Replenishment program to advance treat recycled water using microfiltration and reverse osmosis technologies. The purified water, along with additional recycled water supplies, would be placed into the Mountain Avenue West facility to blend with imported water to further replenish the local aquifer. After going through a natural filtration process underground for at least five years, the water would be extracted and added to EMWD's drinking water supplies, providing another sustainable local water supply source.

While EMWD is investing heavily in infrastructure to support its groundwater production, managing the groundwater basins is also critical to creating a sustainable future. EMWD coordinates with local and regional agencies, as well as customers who use groundwater wells, to ensure the basin is sustainably pumped and appropriately replenished while keeping its focus on water quality.

Through this holistic approach to groundwater management, EMWD is working to provide for its customers today and tomorrow, just as it has done for 72 years – through safe and reliable water services that start with local resources.

"As we prepare for our customers' water supply future, it is important that we always remember where we came from," Paule said. "Our investments – yesterday, today and tomorrow – in local groundwater programs continue to provide our current customer and future generations with a safe and reliable source of water. Our customers can have confidence that we will be able to meet their needs every time they turn on their taps." ❍

emwd EASTERN MUNICIPAL WATER DISTRICT

For more information, visit emwd.org.

Collaboration and Resiliency

Preparing for the Future in the San Bernardino Valley

*"***WATERSHED CONNECT** *reflects the region's long-standing commitment to integrated water resource management and collaboration across traditional boundaries."*

Heather Dyer
CEO / General Manager

The San Bernardino Valley Municipal Water District

The San Bernardino Valley Municipal Water District (Valley District) is leading multi-agency collaboration across the Inland Empire and throughout the state. As a State Water Contractor and regional water provider, Valley District is tasked with managing groundwater storage, identifying and securing new water resources for the future, and partnering with surrounding agencies to ensure a reliable water supply throughout the watershed.

Valley District's mission is *"to work collaboratively to provide a reliable and sustainable water supply to support the changing needs of the region's people and environment."* While a reliable water supply for constituents is the number one priority, it is not Valley District's only priority. The social, economic, and regulatory landscapes require considerations of how water projects could impact other variables, including neighboring agencies, public uses of the river, native ecosystems, and endangered species, as required by state and federal permits.

Over the last 10 years, Valley District has taken a new approach to old challenges: one of collaboration and partnership. This approach has changed the way water is used and managed throughout the region.

This change in perspective is reflected in the Upper Santa Ana River Habitat Conservation Plan; a partnership of 11 water agencies all trying to build infrastructure and challenged with similar environmental issues. Over the last decade, Valley District found that the most successful approach to overcoming environmental permitting challenges, including endangered species issues, was to become part of the recovery solution. In essence, if local water supply reliability projects help recover the environment, we improve the overall conditions of the River and native species, which makes it easier to obtain permits in the future. The Habitat Conservation Plan secures a 50-year permit for over 100 regional water projects, while at the same time protecting, enhancing, and restoring habitat for 22 threatened or endangered species. Learn more here: https:// www.youtube.com/watch?v=3yAkkabwn0E.

Regional Recycled Water System

One current initiative of Valley District is the construction of a regional recycled water system. This system will include conveyance pipelines and new recharge basins to replenish our local groundwater supplies.

The first phase of the Regional Recycled Water System is construction of the Weaver Basins and connection to the East Valley Water District's Sterling Natural Resource Center and the San Bernardino Municipal Water Department's Tertiary Treatment System.

These two treatment plants will treat wastewater generated in their service areas and convey approximately 11,600-acre feet per year of tertiary-treated water to local basins for recharge. This water will percolate into the groundwater basin, augmenting local water supplies pursuant to Title 22 regulations.

The Regional Recycled Water System provides a new local, reliable, and drought-proof water supply that will increase long-term regional water supply reliability and drought resilience. Recycled water will augment local rainfall and imported State Water Project supplies year-round. To see more about the Weaver Basins project, watch this video: https://youtube/KU8Jnd92hCg.

Watershed Connect

Valley District recently replicated the successful regional approach and collaborative model of the Habitat Conservation Plan to secure programmatic infrastructure funding for multiple local water agencies. **WATERSHED CONNECT** is a program of connected or complimentary water projects designed to maximize water supply reliability, climate resilience, and long-term ecological health of the Upper Santa Ana River and the shared groundwater basin.

Valley District partnered with several water agencies to create a regional infrastructure funding program. The program includes water capture, groundwater recharge and storage, advanced water treatment, and conveyance projects along with renewable energy and habitat projects. **WATERSHED CONNECT** highlights the linkages and synergy created between the projects based on the idea that as one agency improves parts of the shared system – the benefits cascade through the entire system for regional benefit.

WATERSHED CONNECT projects will capture over 38,000 AFY of stormwater runoff, produce and distribute over 25,000 AFY of recycled water for groundwater recharge, and generate over 1,300 kW of renewable energy. In doing so, it will also restore over 870 acres of habitat and create 830 acres of open space.

The program reflects the region's long-standing commitment to integrated water resource management and collaboration across traditional boundaries. **WATERSHED CONNECT** was invited to apply for up to $177 million in EPA funding for the first phase of 21 projects and envisions this will be a long-term funding platform for the region.

Convening of Upper Santa Ana River Mayors

On March 30, Valley District hosted the first Upper Santa Ana River Mayors' Breakfast. The Mayors of Grand Terrace, Highland, Rialto, Riverside, and San Bernardino, along with many water agencies' elected officials and representatives, convened to discuss projects along the River and opportunities to collaborate for greater community benefit. This forum, planned to occur several times per year, was an opportunity to learn about the impacts a healthy River can have on our local economy. Dr. Kurt Schwabe of UC Riverside gave the keynote address.

To learn more about Valley District and its collaborative regional projects, visit www.SBVMWD.com. ❍

Jurupa Community Services District

A Proud History – A Bright Future

Jurupa Community Services District (JCSD) is a public agency with a proud history of service to the local community. Incorporated in 1956, JCSD was established to provide sewer services to the Jurupa area of western Riverside County. Governed by an elected five-member Board of Directors, JCSD has grown exponentially since its incorporation with its service area expanding from 26 square miles to 40.8 square miles. Today, JCSD provides water, wastewater, park and recreation, graffiti abatement, and street lighting services to over 130,000 residents and commercial facilities located within its service area. JCSD's service area encompasses the Cities of Jurupa Valley and Eastvale. As one of the Inland Empire's "Top Workplaces," JCSD has approximately 215 employees responsible for providing excellent customer service driven by its high standards to provide safe, reliable, economical, and environmentally friendly services.

Water and Wastewater Services

JCSD's primary water sources are local groundwater basins. Local groundwater supplies include untreated water pumped from the Chino Basin for potable and non-potable uses and groundwater pumped from the Riverside Basin for non-potable use. With over 32,000 residential, commercial, and irrigation connections, JCSD works hard to provide a reliable, high-quality water source to our customers. JCSD is also pursuing alternative sources of water supplies, including regional recycled water projects to help diversify its water portfolio in the future. Furthermore, JCSD is committed to remaining a regional leader in promoting water conservation and investing in its numerous conservation and outreach programs.

JCSD's wastewater system is split between three separate service areas that each discharge to separate systems. Since JCSD does not operate any wastewater treatment facilities of its own, it has capacity rights to three wastewater treatment facilities: the City of Riverside Regional Water Quality Control Plant, Western Riverside County Regional Wastewater Authority, and the Orange County Sanitation District Treatment Plant.

Parks, Recreation, and Other Services

In 1995, the JCSD Parks and Recreation Department was formed to provide parks and recreation services for the Eastvale community. Since this time, JCSD has been providing quality and award-winning services. The Parks and Recreation Department is one of only four accredited agencies through the National Recreation and Park Association's Commission of Accreditation for Parks and Recreation Agencies (CAPRA). The Parks & Recreation Department is responsible for providing recreation programs, community-related activities and special events, managing over 228 acres of parkland, first-class athletic fields, two splash pads, trails, a 30,000 square foot community center, a 6,500 square foot activity center, and a premier recreational and leisure venue in the Desi House.

In 1992 and 1993, the JCSD Board of Directors recognized the need to eradicate the growing blight of graffiti within JCSD's service area, authorizing JCSD's Graffiti Abatement Program. This program has been successful in keeping the costs down to the property owners. JCSD also contracts with neighboring agencies to provide graffiti removal services to those service areas.

JCSD is proud of its history serving the Jurupa Valley and Eastvale communities. This great history of service is matched with its great plans for the future. For more information, visit www.JCSD.us. ❍

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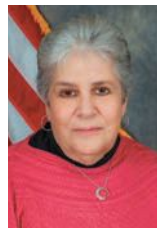

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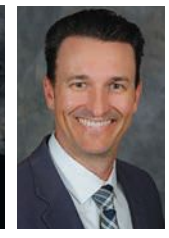


Chris Berch
General
Manager

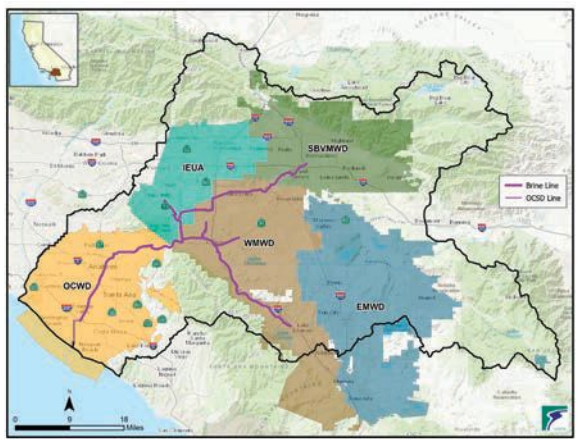
Santa Ana Watershed Project Authority

Addressing Regional Water Issues and Promoting Watershed Sustainability since 1972

The Santa Ana Watershed Project Authority (SAWPA) is a Joint Powers Authority (government agency) serving the Santa Ana River Watershed (Watershed), a 2,840 square-mile region that is home to over 6 million residents in portions of San Bernardino, Riverside, and Orange Counties, and a small portion of Los Angeles County. Established in 1972, SAWPA provides a unified voice for the water management needs within the Watershed. Its mission is to make the Watershed more sustainable through fact-based planning and informed decision-making, regional and multi-jurisdictional coordination, and the innovative development of policies, programs, and projects. SAWPA is composed of five member agencies that provide water services covering the Watershed.

~ Eastern Municipal Water District
~ Western Municipal Water District
~ Inland Empire Utilities Agency
~ San Bernardino Valley Municipal Water District
~ Orange County Water District

SAWPA partners with agencies across the region and has facilitates regional interagency agreements allowing agencies to address problems on a watershed-wide level. A number of projects increasing water supply and improving water quality within the Watershed have been constructed under SAWPA's administration based on the award of over $400 million in grant funding from State Water Bonds over the past 20 years.



SAWPA manages the 93-mile Brine Line to manage salinity in the Watershed.

Inland Empire Brine Line

The Inland Empire Brine Line (Brine Line) operated by SAWPA is an effective, economical way to dispose of salty wastewater, produced through manufacturing and water treatment processes. The Brine Line is a pipeline that currently spans 93 miles across the Watershed, removing 500,000 pounds of salt from local industry effluent daily.

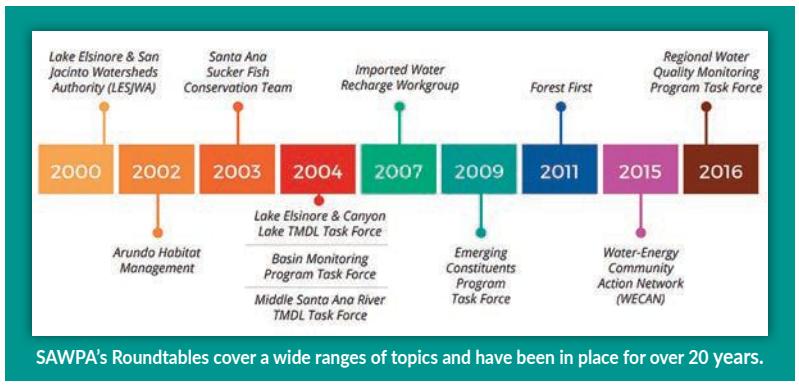
Because of salinity restrictions, measured as total dissolved solids (TDS), in regional wastewater treatment plants, many industries are prevented from discharging their wastewater to the municipal sewer. With the Brine Line, a variety of water-intensive businesses can now dispose of salty wastewater locally at a substantial cost savings. To dispose of their wastewater to the Brine Line, Inland Empire businesses can use Trucked Disposal to a collection station or Direct Disposal, a direct connection to the Brine Line. The Brine Line conveys salty wastewater from the Watershed to a wastewater treatment plant operated by the Orange County Sanitation District (OC San). After treatment, the water is then safely discharged into the Pacific Ocean.

One Water One Watershed

One Water One Watershed (OWOW) is SAWPA's watershed-wide Integrated Regional Water Management plan that envisions a sustainable Watershed that is drought proof, salt balanced, and supports social, economic, and environmental vitality by the year 2040. The OWOW plan was written by over 100 authors from water agencies, non-profits, and other stakeholders in the Watershed to analyze, develop, and describe new integrated solutions. Through OWOW, the Watershed has been able to capture 180,000 Acre-Feet (AF) of additional surface and imported water.

Regional Initiatives

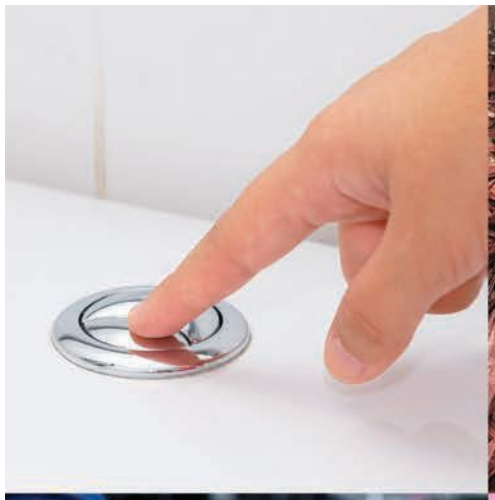
To address growing concerns of climate change and continuing drought conditions as a watershed, SAWPA is working closely with the State on several initiatives to promote watershed resiliency. These include working with statewide forums in the development of the upcoming California Water Plan 2023, watershed resilience initiatives, and climate change resilience and adaptation. SAWPA is also exploring initiatives that address new water resource strategies such as a watershed-wide weather modification (cloud seeding) pilot program, expanded stormwater capture, and increased support programs to underrepresented communities particularly vulnerable to the impacts of drought cycles and climate change.

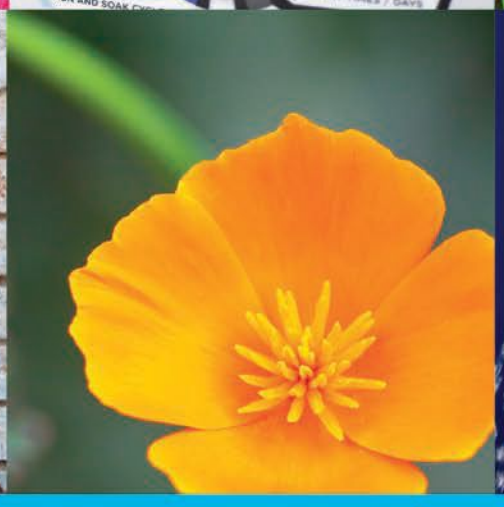


SAWPA's Roundtables cover a wide ranges of topics and have been in place for over 20 years.

Roundtables

The SAWPA Roundtables, also known as Task Forces, provide a forum for joint water resource management efforts to address watershed issues and regulatory compliance. The Roundtables administered by SAWPA staff create value among regulators and the regulated community by facilitating stakeholder processes for collaboration and producing significant cost savings through joint efforts to address water management issues. The SAWPA Roundtables have addressed the cleanup of surface water and the restoration of natural systems while mitigating potential conflicts in the Watershed. To learn more, visit sawpa.org. ❍





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